Research Article

Compensatory Network Capital: Negative and Ambivalent Ties in the Conversion of Health Literacy into Action

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Critical health literacy has strengthened attention to inequality, power and structural conditions, but less is known about the relational processes through which health-related competencies are translated into action in everyday healthcare. This qualitative study examined how negative and ambivalent social ties shaped the conversion of health-related knowledge, intentions and professional advice into observable health action among adults living with multimorbidity in contexts of social vulnerability. Twelve semi-structured interviews were conducted with adults recruited through municipal health promotion and rehabilitation services, and follow-up contact with survey respondents. Analysis was abductive and used Compensatory Network Capital (CNC) as a sensitising framework. Through interviews, participants often demonstrated knowledge, motivation and awareness of recommended care. However, action was frequently delayed, redirected, or blocked when support was difficult to mobilise, poorly matched to the task, insufficiently recognised in institutional encounters, or unavailable to act on another's behalf. These patterns were captured through four tie-level mechanisms: Activation, functional specificity, recognition and substitution. Negative and ambivalent ties operated not only as psychosocial stressors but also as practical barriers affecting help-seeking, follow-up, care coordination and digital navigation. The study contributes to critical health literacy by specifying a micro–meso relational layer through which structural and institutional conditions are enacted in practice. It suggests that equity-oriented health promotion should address not only individual skills, but also the relational and organisational conditions that enable health-related action.

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1. Background

A substantial body of epidemiological research has documented protective associations between social support and health outcomes[1][2][3].

While such findings underscore the importance of social relationships for health, support is typically operationalised as an additive or cumulative resource. Although cumulative indices demonstrate that social support matters, they obscure how relational mechanisms operate in concrete healthcare situations, including how ties are mobilised, negotiated, aligned with specific demands, or potentially misaligned with professional advice. In this study, Compensatory Network Capital (CNC) is used as an analytical framework for specifying the relational mechanisms through which health-related competencies are converted into action[4].

While these approaches have yielded robust associations with health outcomes, they tend to treat support as a stable attribute of individuals or networks rather than as a situational process. Negative interactions are often measured separately as stressors[5][6], leaving the relational dynamics between support provision, institutional contexts and concrete action under-specified. As a result, existing models struggle to explain why individuals with apparently adequate support and health literacy may nevertheless fail to enact recommended health behaviours.

These limitations are particularly relevant in the development of Critical Health Literacy (CHL), which marked a significant shift beyond functional, individual skills to emphasise critical reflection, collective agency and the ability to act on the social determinants of health[7][8][9][10].

By situating health literacy within structural inequalities, institutional arrangements and power relations, CHL demonstrated that health literacy is socially stratified and embedded in configurations of economic, cultural and symbolic capital[11]. Yet even within this critical tradition, the relational conditions under which competencies are enacted remain insufficiently specified.

If health literacy is to function as a capability rather than merely a cognitive resource, it becomes necessary to examine how social ties facilitate, constrain or redirect action in concrete situations. This includes not only supportive relations but also ambivalent or conflictual ties that may undermine help-seeking, contradict professional advice or generate relational strain[6][12]. In contexts of multimorbidity, where treatment burden, fragmented care pathways and digitalised service systems increase

coordination demands[13][14], such relational dynamics may decisively shape whether competencies are enacted.

Relational approaches such as Distributed Health Literacy (DHL) have begun to address this limitation by demonstrating how health-related competencies are shared and mobilised within social networks[15][16]. However, social relations are frequently conceptualised as supportive or enabling resources. Much less attention has been paid to negative or ambivalent ties and to the ways in which conflict, strain, moral judgement, dependency norms or competing health logics may actively suppress, distort or delay health-related action[17]. Research on patients with multimorbidity further indicates that treatment burden and social inequality intersect within complex relational processes that impact participation and self-management[18][19].

Capability-based approaches further underline that resources acquire practical significance only through conversion processes that translate endowments into real opportunities for action[20][11]. Recent quantitative health literacy research similarly suggests that the relationship between health literacy and health outcomes is conditioned by social and personal conversion factors rather than operating uniformly across groups[21]. Yet these conversion factors have mainly been operationalised as broad structural (e.g., education, income, institutional access) or individual moderators, leaving micro–meso relational mechanisms under-theorised. This limits our ability to explain how competencies become observable practices in everyday healthcare encounters. One important intermediate step in the pathway from health literacy to health may be decision-making ability: health literacy may support people's capacity to make health decisions, but this capacity is itself shaped by contextual factors and does not translate uniformly into favourable outcomes[22].

Together, these strands of research suggest the need for empirically operationalisable frameworks that conceptualise social relations as analytically neutral and specify how micro–meso relational processes shape the conversion of health literacy into observable health practices. This need is particularly salient in contexts of multimorbidity and social vulnerability, where treatment burden, digital systems and fragmented care demand sustained relational coordination.

Against this background, the present study examines how negative and ambivalent social ties shape the conversion of health-related knowledge and competencies into concrete health-related action among adults living with multimorbidity in contexts of social vulnerability.

Research question

The article explores how negative and ambivalent social ties influence the conversion of health-related knowledge and competencies into concrete health-related action among people living with multimorbidity, focusing on the relational mechanisms through which such ties suppress, distort or constrain action in everyday healthcare situations.

To address this gap, the study adopts a social conversion perspective and uses CNC as an analytical framework to examine how relational mechanisms operate in concrete healthcare settings. CNC specifies, at the micro–meso level, how social relations function as conversion processes that link competencies to observable health-related practices.

Conceptual Framework

CNC is used here as an operational framework for analysing relational conversion processes in everyday healthcare among adults living with multimorbidity. A fuller theoretical elaboration is provided elsewhere[4].

Operationalisation of CNC

CNC is defined as a health-specific subdimension of social capital that captures how an individual's immediate social network influences the translation of health-related resources into concrete health actions in everyday healthcare situations. Rather than focusing on network size, density or generalised trust, CNC specifies tie-level conversion processes through which relations enable, constrain or distort the enactment of competencies[4].

Social relations are treated in analytically neutral terms, recognising that ties may be enabling, ambivalent, or obstructive depending on the situational context. CNC is thus not an additional resource construct but a specification of the relational conditions under which resources become actionable[4]. This analytical neutrality avoids assuming that network embeddedness is inherently beneficial and permits ambivalence, misalignment and obstruction to be examined within the same vocabulary as enabling relations[23][24][6][12]. CNC therefore treats social capital not as a static stock of resources but as a relational condition whose value depends on situational convertibility within specific institutional fields[11].

CNC is specified through four relational conversion mechanisms (A–F–R–S) applied as sensitising analytical constructs rather than fixed or sequential stages:

1. **Activation** refers to whether relevant social ties are mobilised or withheld when individuals face health-related demands. Activation depends not only on network availability but also on relational risks such as anticipated conflict, stigma, dependency or burdening others.
2. **Functional specificity** concerns the degree to which the available support matches the practical, cognitive or emotional demands of a given situation. Misaligned support may hinder rather than facilitate action.
3. **Recognition** captures whether informal support is acknowledged and incorporated within institutional encounters. Activated ties may lose effectiveness if professionals or organisations disregard their role in care processes.
4. **Substitution** denotes situations in which social ties act directly on behalf of the individual, such as booking appointments, attending consultations or managing digital correspondence, particularly when personal capacity is limited.

Full compensation requires the alignment of all four mechanisms; empirically, cases more often exhibit partial or disrupted configurations[4]. Negative and ambivalent ties are therefore conceptualised not as an absence of support, but as relational processes that suppress activation, misalign support, undermine recognition or hinder substitution.

Positioning within a Capability-Based Perspective

Figure 1 positions CNC as a relational layer between individual health literacy competencies and observable health-related outcomes. Whereas instruments such as HLS[25] and HLQ[26] primarily assess individual resources, and DHL highlights the distribution of competencies across networks[15], CNC specifies the mechanisms through which ties shape the conversion of those competencies into action.

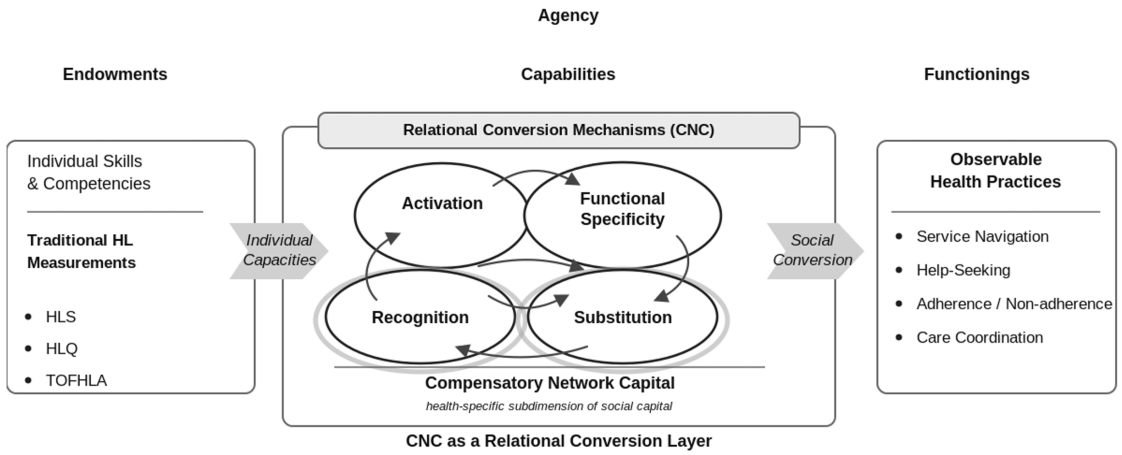

Figure 1. CNC is a relational layer between health literacy competencies and outcomes.

In this article, "action" refers to observable practices such as booking appointments, attending consultations, responding to digital correspondence, and completing follow-up tasks.

Table 1 summarises the conceptual distinctions between CHL, DHL and CNC, highlighting CNC's contribution in specifying negative and ambivalent ties as analytically explicit mechanisms that shape health-related action.

Dimension	Critical Health Literacy (CHL)	Distributed Health Literacy (DHL)	Compensatory Network Capital (CNC)
Primary purpose	Empowerment, critical reflection and collective action	Understanding how health literacy is shared and mobilised within social networks	Explaining how individual health literacy is converted (or not) into action through relational mechanisms
Theoretical foundation	Critical pedagogy, empowerment theory, and social justice	Social support, social capital, network perspectives	Capability approach, social capital theory (conceptualised as a health-specific relational resource), and social conversion mechanisms
Analytical focus	Power relations, structural conditions, and critical awareness	Supportive functions of social relations	Situational relational mechanisms shaping action and inaction
Analytical level	Macro–meso (structural and collective)	Meso (networks and interpersonal relations)	Micro–meso (tie-level mechanisms in concrete situations)
View of social relations	Context shaping agency	Primarily enabling and supportive	Analytically neutral: enabling *and* constraining (positive and negative ties)
Treatment of negative ties	Implicit or indirect	Largely absent	Explicitly theorised and empirically analysable
Conceptual clarity	Normative and critical	Conceptually broad; overlaps with social support and social capital	Distinct mechanisms with clear analytical boundaries
Operationalisation	Mainly qualitative and normative	Predominantly qualitative; limited quantitative tools	Designed for qualitative and quantitative operationalisation
Contribution to health equity	Highlights structural injustice and power	Highlights relational resources	Explains relational barriers and facilitators in the conversion of competencies into action

Table 1. Conceptual comparison of CHL, DHL and CNC

2. Methods

Study design and analytical approach

This qualitative, theory-informed study employed an abductive analytical approach to refine the emerging CNC framework. Abduction was chosen because it enables systematic movement between empirical material and theoretical development, allowing unexpected or contradictory findings to inform conceptual refinement[27]. This was essential for a study aiming to sharpen the relational mechanisms through which health literacy becomes actionable in everyday health practices. Rather than testing predefined hypotheses, the analysis sought to clarify how social ties condition the conversion of health literacy into concrete health-related action.

The study was guided by a social conversion perspective[11], which conceptualises health literacy as a conditional capability shaped by social, relational and institutional contexts. Within this framework, CNC served as a set of sensitising concepts[28], that offer interpretive direction while preserving openness to empirical variation, making them particularly suited for exploring socially embedded processes. In this study, they provided a structure for examining how the four CNC mechanisms (A-F-R-S) operate in concrete healthcare situations without pre-empting what these processes would look like empirically.

Reflexive memo writing, ongoing documentation of analytical decisions and regular peer debriefings supported methodological rigour and transparency. The researcher's background in health literacy and social inequality informed sensitivity to relational dynamics, while reflexive practices helped mitigate confirmatory bias.

Participants and recruitment

Participants were 12 adults (Table 2) living with multimorbidity, defined as having two or more chronic conditions requiring continuous engagement with health or welfare services[29]. Recruitment occurred through municipal health promotion and rehabilitation services and through follow-up contact with respondents from an earlier survey who had consented to qualitative interviews.

Pseudonym	Gender	Age group	Chronic conditions	Living situation	Social network involvement
Peter	Male	60+	Diabetes, heart disease	Living alone	Low involvement, socially isolated
Maria	Female	50+	Arthritis, hypertension	Living with spouse	Moderate, inconsistent support
Hans	Male	50+	Depression, heart disease	Living alone	Moderate targeted, informational support
Camilla	Female	40+	Diabetes, chronic pain	Living alone	Moderate, sporadic family involvement
Karen	Female	60+	COPD, anxiety	Lising with spouse	Moderate spouse assists with medication routine
Anna	Female	50+	Diabetes, depression	Living alone	Low reluctance due to shame/stigma
Poul	Male	50+	Diabetes, hypertension	Living with spouse	Moderate, spouse supports medication routine
Dennis	Male	50+	Chronic pain, anxiety	Living alone	Low, reluctance due to perceived weakness
Mette	Female	40+	Hypertension, autoimmune disease	Living with spouse	High, active, comprehensive support
Julia	Female	20+	Asthma, anxiety	Living with family	Moderate, supportive but occasionally misaligned
Sisse	Female	40+	Diabetes, obesity	Living with spouse	High, active peer support
Henrik	Male	60+	Diabetes, cardiovascular disease	Living alone	Low digital isolation, limited network

Table 2. Overview of informants in the qualitative study, all having at least two chronic conditions

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Sampling followed principles of thematic sufficiency. The aim was conceptual depth rather than statistical representativeness. After twelve interviews, no new relational conversion processes were identified, suggesting that additional interviews would not substantially expand the analytical insights[27]. This approach aligns with abductive research, where the stability and interpretive clarity of emerging mechanisms determine sufficiency.

A maximum-variation sampling strategy[30] ensured heterogeneity across age, gender, education, living arrangements, employment status and degrees of social vulnerability. Social vulnerability was deliberately included as an analytical criterion, as relational constraints tend to be more pronounced in contexts marked by economic hardship, long-term illness or fragmented support structures. This diversity enabled examination of how CNC mechanisms function across different relational and institutional configurations. Sampling decisions and recruitment procedures were documented reflexively to ensure transparency and minimise systematic blind spots.

Data collection

Data were collected through semi-structured, in-depth face-to-face or online interviews, according to participants' preferences and health status[31]. Interviews lasted 30–60 minutes and explored experiences with health-related information, decision-making, everyday actions, interactions with professionals and the involvement of social relations in managing healthcare tasks.

The interview guide was intentionally broad and exploratory to elicit both supportive and obstructive relational experiences. While health promotion research often focuses on the protective aspects of social support, this study also actively probed negative, ambivalent and conflictual ties. Participants were encouraged to describe situations in which they perceived themselves to be struggling to translate knowledge into action, when support felt misaligned or overwhelming, or when institutional procedures constrained the involvement of informal supporters. Opening the space for relational complexity was crucial for identifying conditions under which health literacy becomes practically actionable or remains unrealised.

All interviews were audio-recorded with informed consent and transcribed verbatim. Field notes were used to capture contextual observations, emotional cues and emerging analytical reflections, contributing to interpretive depth and reflexive transparency.

Analytical procedure

Analysis followed a multi-stage abductive process. In the first stage, transcripts were read closely to identify episodes in which health-related knowledge or intentions did not lead to observable health-related action. These episodes were coded descriptively using in vivo phrasing where possible, with attention to situational context, relational dynamics, and the microprocesses shaping action or inaction[32]. Health-related actions were defined consistently as observable practices such as booking appointments, attending consultations, responding to digital correspondence, contacting professionals, or completing follow-up tasks.

In the second stage, descriptive codes were synthesised into broader interpretive themes. CNC mechanisms served as sensitising concepts, guiding but not constraining interpretation. Constant comparison within and across cases was used to refine the analytical boundaries of each mechanism, distinguishing, for example, between suppressed activation driven by anticipated conflict and activation inhibited by institutional expectations of self-reliance[33]. This comparative approach also illuminated overlaps and interdependencies between mechanisms.

Negative and ambivalent ties were identified in accounts characterised by anticipated judgement, emotional strain, inconsistent or misaligned support, withdrawal of involvement or institutional disregard. Particular analytical attention was given to ambivalence, in which the same relation functioned as both enabling and constraining under different conditions. This attention to duality was important, as traditional health literacy approaches often treat relational ties as inherently supportive.

Analytical memos documented interpretive decisions throughout the process, helping to ensure reflexivity, conceptual clarity, and analytical transparency. These memos also supported iterative refinement of CNC as an operational framework.

Ethical considerations

The study adhered to national ethical standards for qualitative health promotion research. As interviews often involved sensitive descriptions of negative or strained social relations, particular care was taken to ensure participants' emotional well-being. Individuals were reminded that they could pause or withdraw at any time, and interviews were conducted to minimise discomfort[34]. According to Danish rules on notifiable health research projects, this interview study did not require review by a regional research ethics committee, as it did not involve biomedical intervention or other procedures subject to committee

review. All participants received written and oral information about the study and provided informed consent prior to participation. Pseudonyms were used to protect confidentiality, and participants were reminded that they could pause or withdraw at any time. Data was handled in accordance with applicable institutional and data protection requirements.

3. Results

The analysis examined how social relationships shaped the translation of health-related knowledge, intentions and professional advice into observable action. Guided by the CNC framework, the four tie-level mechanisms (A-F-R-S) were analysed. Through the interviews, participants frequently articulated relevant health knowledge and motivation. However, enactment varied depending on relational and institutional conditions. Results are presented thematically using the four tie-level mechanisms as an analytical lens.

3.1. Activation: Suppressed mobilisation of relevant ties

Participants described situations in which they refrained from contacting family members or acquaintances despite recognising a need for support. Non-mobilisation was rarely due to the absence of a network; rather, it reflected concerns about relational risks, including anticipated conflict, judgment, stigma, or burdening others. See Table 2 for an overview of respondents′ characteristics, including the pseudonyms used.

Henrik explained why he avoided discussing diabetes management with family:

> “I do not really talk to my family about it. They have strong opinions, and then it becomes a discussion instead of help.”

Here, mobilisation was withheld because involvement was expected to generate friction rather than facilitate action. Activation depended on relational safety rather than network availability.

Anna similarly described withholding concerns:

> “They always think they know better. So, I keep it to myself, even when I am unsure what to do.”

Avoidance served as a strategy to prevent relational strain, yet it limited access to potential sources of support.

Institutional norms also shaped activation. Poul hesitated to seek help with digital booking:

> "I should probably have asked someone, but I did not want to seem stupid. You are supposed to be able to handle those things yourself."

Norms of self-reliance rendered help-seeking socially costly. When mobilisation was suppressed, competencies remained unused despite being present.

Declining or not taking up available social support

In some interviews, participants described situations in which support from family members or others in their social networks was available or offered but not taken up. Help was declined or avoided for different reasons, including norms of self-reliance, reluctance to involve others, or previous negative experiences.

Camilla, a woman living alone with multiple chronic conditions, described how she had historically avoided accepting help even when it was available. She explained that she had long positioned herself as someone who managed on her own:

> "I've always been the kind of person who tries to please everyone and never takes the help that's offered."

Only later in her illness trajectory, she began to accept support, for example, by bringing a family member to medical appointments.

Similarly, Karen described that although help from others was available, she typically handled practical matters herself: "I'm just good at managing on my own."

She reflected that she might sometimes have benefited from asking for help but generally chose not to involve others.

For Dennis, living alone, the reluctance to seek support was linked to personal norms of independence. Although others around him were willing to assist, he explained that he found it difficult to ask for help: "I have difficulty asking for help and getting others involved."

Finally, Peter described deliberately avoiding sharing illness-related concerns despite having acquaintances around him:

> "I don't have anyone here I can confide in."

Taken together, these accounts illustrate how available or offered support may be declined or remain unused when help-seeking is perceived as conflicting with personal identity, independence, or trust in others.

3.2. Functional Specificity: Misaligned or contradictory support

When ties were activated, support did not always correspond to situational needs. Functional mismatch emerged when emotional reassurance or general advice replaced task-specific assistance.

Karen described motivational comments that did not translate into practical help:

> "They say things like 'you just have to pull yourself together' or 'try harder.' However, that does not help when you are the one who has to deal with it every day."

Relationally supportive intentions did not align with practical demands.

Poul recounted asking for help navigating digital systems:

> "He told me how easy it was and what I should do, but he did not actually help me do it. So, it just stayed undone."

Advice substituted for concrete assistance, leaving tasks incomplete.

Erik described emotionally affirming responses that conflicted with clinical guidance:

> "They said it was not that bad and that I should not make a big deal out of it. So, I did not go back for a while."

Here, support shaped actions that diverged from professional recommendations. Effective enactment depended on alignment between the provided and required support.

In many accounts, relational support took forms that were emotionally supportive or socially meaningful but did not facilitate concrete health actions.

Maria, a woman with diabetes and hypertension, described how everyday social interactions sometimes conflicted with her intentions to follow dietary advice. Although she discussed healthy eating with a close friend who also had diabetes, their interactions often undermined these intentions:

> "We talk about eating healthy… but then he shows up with two cream cakes from the bakery."

Similarly, family support could conflict with dietary management. Maria explained how her children continued preparing traditional foods despite her diagnosis:

> "Even after I told them I had diabetes, they said: 'Are we having creamy potatoes this weekend?'

In these situations, relationships provided companionship and emotional support but simultaneously produced practical obstacles to behaviour change.

Functional mismatch also occurred in institutional encounters when participants received advice without corresponding assistance. Maria described asking her doctor for help managing her weight and diabetes, but felt the response remained limited to a referral rather than practical guidance:

> "I asked the doctor if she would help me... and she could only offer me a meeting with the dietitian."

Participants also described cases where health-related programmes did not align with everyday constraints. Karen, who was still working full-time, explained that several municipal programmes were offered during working hours and therefore remained inaccessible:

> "They offered different activities, but they were during my working hours."

Here, support structures existed but were not functionally aligned with participants' practical circumstances. As a result, available support did not translate into concrete assistance.

Across interviews, functional specificity therefore depended not only on the presence of support but also on whether the type, timing, and form of assistance corresponded to participants' everyday needs.

3.3. Recognition: Institutional accommodation of informal support

A third mechanism concerned whether informal support was acknowledged within institutional encounters. Even when ties were mobilised and functionally relevant, their contribution could be limited if organisations failed to accommodate them.

Birgit attended consultations with her daughter:

> "She joins me because I forget things, but the staff still speak only to me and hurries. Later, we realise important details were missed."

Although support was present, institutional communication practices restricted its effectiveness.

Mette described assistance with correspondence:

> "My sister helps me with the letters and calls, but officially, it is still just me. So, when something goes wrong, it is my responsibility."

Support remained administratively invisible.

Digital systems further constrained relational involvement. Poul noted:

> "They say you can get help, but then everything must be done in your own name. So even if someone helps you, it does not really count."

Recognition operated at the interface between interpersonal relations and organisational procedures. Where accommodation was limited, the practical value of activated support diminished.

3.4. Substitution: Fragile or blocked acting on behalf

Substitution occurred when others acted directly on behalf of individuals with limited capacity. In several accounts, substitution enabled follow-up but remained contingent.

Henrik described periods of cognitive and emotional exhaustion:

> "There are days when I just cannot deal with it. Then things pile up, and nothing happens."

In such moments, acting on behalf was necessary to sustain engagement.

Mette described reliance on her daughter:

> "She helps when she can, but she has her own life. If she is busy, then it just stops."

Substitution depended on availability rather than stable arrangements.

Institutional rules also restricted substitution. Poul explained:

> "They say someone can help you, but then they will not talk to them anyway. So, in the end, it still has to be me."

Digital authentication and consent requirements limited third-party involvement. Substitution was therefore situational and vulnerable to interruption.

Camilla described relying on family members when written communication from institutions became difficult to understand:

> "If my sister doesn't have time, then I ask my niece: 'Can you help me read this? I simply don't understand it.'"

Such assistance allowed administrative tasks to be completed but depended on the availability of relatives and, therefore, remained informal and unstable.

3.5. Accumulated relational constraints

Across interviews, these mechanisms rarely appeared in isolation. Participants often described situations where suppressed activation, functionally misaligned support, and limited institutional recognition co-occurred. Consequently, participants frequently possessed relevant health knowledge and expressed intentions to follow professional advice, yet translating these competencies into concrete actions depended on relational and institutional conditions. Variation in observable practices, therefore, reflected differences in conversion conditions rather than differences in expressed competence.

CNC mechanism	Relational condition observed in interviews	Typical empirical pattern	Illustrative interview evidence	Consequences for health action
Activation (A)	Suppressed mobilisation of available ties	Participants avoided contacting family or acquaintances due to anticipated conflict, judgment, or norms of self-reliance	"I do not really talk to my family about it .. it becomes a discussion instead of help (Henrik)"/"I am just good at managing on my own" (Karen)	competencies remain unused because support is not mobilised
Functional Specificity (F)	Misalignment of available support and situational needs	Support takes the form of encouragement or general advice rather than practical assistance	"He told me how easy it was... but did not actually help me to do it" (Poul)	Tasks remain incomplete despite expressed motivation
Recognition (R)	Institutional practices fail to accommodate informal	Relatives attend consultations or help with administration, but are not formally acknowledged in communication or procedures	"My sister helps me with the letters, but officially it is still just me" (Mette)	Informal support remains administratively invisible and less effective
Substitution (S)	Others act on behalf of participants when capacity is limited	Family members temporarily manage tasks such as understanding letters or attending appointments	"If my sister does not have time, I ask my niece to help me read it" (Camilla)	Action becomes dependent on the contingent availability of others

Table 3. Negative and constraining relational mechanisms in the conversion of health literacy.

Table 3 summarises how negative and constraining relational conditions hindered the conversion of

health literacy competencies into concrete action across the interviews. The constraints, their causes, and their consequences can be alleviated or prevented, either by influencing the attitudes of the individual or the network, or, more rationally, by the healthcare system intervening through the four mechanisms.

Discussion

Main Findings in Context

This study shows that the translation of health-related knowledge into concrete health action cannot be understood solely in terms of individual competencies; it is also shaped by relational and institutional conditions in everyday healthcare. In line with capability-oriented perspectives that foreground structural and relational determinants, our findings suggest that health literacy operates as a situated capability rather than a purely personal attribute[20][11]. Using the four tie-level mechanisms in the CNC framework (A-F-R-S), we identified recurrent barriers and enabling conditions along the pathway from intention to action. The findings indicate that relational convertibility, that is, whether social ties make competencies practically actionable helps explain variation in health-related action among adults living with multimorbidity, alongside rather than instead of knowledge and motivation. This complements prior work suggesting that decision-making ability functions as an intermediate link between health literacy and health outcomes[22]. Our contribution is to specify how tie-level relational mechanisms shape whether such decision-making is translated into concrete action in everyday care.

Where CHL foregrounds structural inequality and DHL highlights the distribution of competencies across networks, CNC specifies the tie-level mechanisms through which those competencies become actionable or fail to do so in concrete care situations. Our analysis also extends research on negative and ambivalent ties, which has often treated them primarily as conflict, criticism and strain functioning as psychosocial stressors affecting emotional well-being or adherence[5][35]. In our interviews, such ties also emerged as practical barriers in everyday healthcare. Participants postponed tasks because they anticipated judgment or conflict when asking for help, received well-intended but poorly matched assistance that delayed action, or were blocked by digital authentication systems that prevented relatives from acting on their behalf. Negative and ambivalent ties thus shaped action not only through psychosocial strain, but through suppressed mobilisation, misaligned support, limited recognition and blocked proxy involvement. This extends both sociological and health literacy research by showing how such ties affect the convertibility of health-related competencies in practice[12][17].

A particularly important contribution of this study is the identification of cumulative relational constraints. Activation barriers, functional mismatch, lack of recognition and fragile substitution rarely appeared in isolation; rather, they accumulated across interactions and care episodes, thereby increasing the likelihood that knowledge and intentions would not be enacted. This resonates with ethnographic findings from "Seeing the Invisible"[36], which show that individuals with formal entitlements may still struggle to access services when relational scaffolding is missing, and with evaluations of the Social Health Bridge-Building Programme[37], where structured accompaniment and legitimised questioning improved follow-up and care coordination. Together, these studies suggest that relational conversion capacity is modifiable and may constitute a practical target for health promotion and equity-oriented support.

These intervention studies show that relational support can enable health action, but they do not systematically specify how support is converted into action across concrete care episodes. Our findings make that conversion process more visible by identifying the mechanisms through which support becomes actionable, misaligned or blocked.

The findings also point to recognition and substitution as particularly sensitive leverage points in contemporary healthcare systems. In highly digitalised and administratively complex settings, willingness to help is insufficient if institutional rules restrict proxy involvement. Similar observations appear in research on cultural health capital and clinical interaction, where recognition within the healthcare field shapes whose knowledge becomes actionable[38][39]. Future research should examine whether recognised proxies are more likely than unrecognised helpers to complete health-related tasks, thereby clarifying how relational resources become effective within specific organisational settings.

Future research should also examine graded patterns of full, partial or failed conversion, rather than assuming that network presence is uniformly protective, and test whether cumulative relational constraints are associated with observable healthcare outcomes[40][41]. This would help differentiate social support as a general resource from social conversion as a situational mechanism.

Implications for Practice

CNC has practical implications for clinical care, municipal health promotion, social prescribing and adjacent referral models, and digital health infrastructures.

For clinicians, the interviews caution against assuming that relatives are consistently supportive or able to help. Brief relational screening could identify activation barriers (e.g. shame or anticipated conflict), functional mismatch (general advice rather than task-specific help) and recognition gaps. Evidence from communication research suggests that involving informal carers can improve recall, safety and continuity[42][43]. Our findings indicate that such involvement is most useful when supporters are explicitly recognised and enabled to assist with concrete tasks, rather than merely being present.

For municipal programmes, the findings suggest shifting some attention from motivating the individual alone towards identifying and modifying relational and institutional conversion barriers. This may involve facilitating safe mobilisation of support, providing task-aligned navigation assistance such as digital help or appointment scheduling, formally involving relatives and peers in care processes, and offering accompaniment structures modelled on bridge-building initiatives[37]. This is consistent with broader HL intervention research showing the importance of navigation support, particularly for socially vulnerable groups[44][45].

For social prescribing, CNC suggests that referrals should be assessed not only for availability but also for relational safety (activation), task fit (functional specificity) and organisational support (recognition). International evidence shows that outcomes are uneven when relational or institutional conditions are misaligned[46][47]. CNC thus offers operational criteria for tailoring referrals to the contexts that shape uptake.

Recent research demonstrates that digital health systems often embed assumptions about autonomous digital competence, and when these demands are misaligned with users' actual skills, digitalisation can exacerbate inequality by limiting equitable participation in care[48].

Our findings suggest that delegated digital authority, municipal digital navigator roles and simpler proxy access pathways may strengthen substitution for people with multimorbidity and limited digital competence. Such measures align with HL research calling for health system-level accommodations rather than individual remediation[25][49].

Limitations and Future Research

CNC offers a focused micro-meso lens, but it does not by itself capture broader macro-structural determinants such as welfare reforms, labour market exclusion or financing structures. Relational

conversion processes are embedded in these wider contexts and should be analysed alongside them[50] [51].

The qualitative design and recruitment through municipal services may also have underrepresented people who were most disconnected from formal systems. The findings are based on self-reported accounts and cannot establish prevalence or causal direction. In addition, the study relies on participants' retrospective descriptions of relational and institutional processes rather than direct observation of care encounters, and the findings should therefore be interpreted as experienced mechanisms rather than observed interactional sequences. Future research should validate instruments for supportive, absent, negative and ambivalent ties, examine cumulative and interaction effects, and explore how tie-level mechanisms relate to broader network structures. It should also investigate how these mechanisms operate across different institutional settings and welfare arrangements, including contexts with less digitalised systems or different rules for proxy access.

Conclusion

Health literacy may fail not only because individuals lack competence, but because the relational and institutional conditions required to convert competence into action remain fragile, contested or institutionally restricted.

This study shows that adults living with multimorbidity in socially vulnerable contexts often possessed relevant knowledge, motivation and awareness of recommended care, yet enactment depended on whether support could be safely mobilised, functionally aligned with the task, institutionally recognised and, where necessary, enacted through others. Negative and ambivalent ties thus operated not only as psychosocial burdens but as practical conversion barriers in everyday healthcare. These barriers also tended to accumulate across care episodes, increasing the likelihood that knowledge and intentions would not be translated into action.

By analysing these processes through activation, functional specificity, recognition and substitution, CNC adds precision to current work on CHL and DHL. Where CHL foregrounds structural inequality and DHL highlights the distribution of competencies across networks, CNC specifies the tie-level mechanisms through which competencies become actionable or fail to do so in concrete care situations. Health literacy therefore emerges here as a situated capability rather than a purely individual attribute.

For health promotion, the findings point beyond individual skill-building alone towards interventions that reduce relational and institutional conversion barriers. This includes strengthening safe mobilisation of support, improving functional specificity, formally recognising informal helpers and widening practical possibilities for substitution, including proxy action in digital and administrative systems. Addressing these micro–meso conversion processes may improve follow-up, coordination and adherence among people living with multimorbidity and social vulnerability.

Equity-oriented health promotion therefore requires attention not only to what people know, but also to the relational conditions through which health-related knowledge is translated into action.

- Introduces CNC as a way of understanding when support becomes usable in real healthcare situations.
- Shows how family, friends and other close ties can help or hinder people in acting on health advice.
- It shows that negative and ambivalent relationships affect care not only through stress, but also by delaying help-seeking and follow-up.
- Introduces CNC as a way of understanding when support becomes usable in real healthcare situations.
- Points to practical responses such as making it easier to ask for help, providing task-specific support, recognising informal helpers and improving options for proxy action.

Box 1. Contribution to Health Promotion

Statements and Declarations

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Potential competing interests

No potential competing interests to declare.

Author Contributions

CKB conceived the study, obtained funding from Helsefonden (2024), planned and conducted the qualitative study, collected the interview data, led the analysis, and drafted the manuscript. HB provided

substantial comments and critical revision of the manuscript. HVN, TJ, HK, and GTP provided comments and contributed to the review and editing of the manuscript. GTP also conducted some of the interviews with multimorbid participants in the study. All authors read and approved the final version of the manuscript.

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